Ecological Reference Worksheet **MT-NRCS**

Author(s)/participant(s): Maxine Rasmussen
Contact for lead author: Glasgow Area Office, Glasgow, MT **Reference site used? No**
Date: 6-18-04 **MLRA: 53AE Ecological Site: Sands 10-14" p.z.** This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

Indicators. For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above- and below-average years for **each** community within the reference state, when appropriate & (3) cite data. Continue descriptions on separate sheet.
1. Number and extent of rills: Rills should not be present**.**
2. Presence of water flow patterns: Barely observable.
3. Number and height of erosional pedestals or terracettes: Essentially non-existent.
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Bare ground 5 to 10%.
5. Number of gullies and erosion associated with gullies: Active gullies should not be present. Existing gullies should be "healed" with a good vegetative cover.
6. Extent of wind scoured, blowouts and/or depositional areas: Active blowouts should not be present. Historic blowouts should be "healed" with a good vegetative cover.
7. Amount of litter movement (describe size and distance expected to travel): Little to no plant litter movement. Plant litter remains in place and is not moved by erosional forces.
8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values for both plant canopy and interspaces, if different): Plant cover and litter is at 90% or greater of soil surface and maintains soil surface integrity. Stability class anticipated to be 5 – 6.
9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different): Use soil series description for depth and color of A-horizon.
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: High grass canopy and basal cover and small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. Deep rooted warm season grasses enhance infiltration and reduce runoff.
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None.
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: >>, >, = to indicate much greater than, greater than, and equal to): Tall, rhizomatous warm season grasses > >mid-stature, warm season bunch grasses> cool season bunch grasses and grass-likes = forbs > shrubs.
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Very low.
14. Average percent litter cover (40 to 50 %) and depth (0.5 to 0.75 inches). Litter cover is in contact with soil surface.
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 2000 #/acre in 12" ppz but would expect a 100 pound increase or decrease with each gain or loss of 1 inch average annual precipitation.
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do, continue to increase regardless of the management of the site and may eventually dominate the site": Needle and thread, clubmoss, threadleaf sedge, fragile cactus, leafy spurge, blue grama.
17. Perennial plant reproductive capability: All species are capable of reproducing.